

# ABSTRACT OF THE DISCLOSURE

The present invention provides novel isothermal methods of generating multiple copies of, detecting and/or quantifying nucleic acid sequences of interest based on limited primer extension or attachment of oligonucleotide pairs using composite RNA/DNA primers. Methods for generating multiple copies of and/or detecting and/or quantifying nucleic acid sequences, wherein products of primer extension or attachment of oligonucleotide pairs comprising a cleavable portion are generated, and wherein cleavage of the products results in dissociation of cleaved products from target polynucleotides, are provided. The invention further provides compositions, kits and systems for practicing these methods.